Filing Date: July 2, 1999 Title: LOGIC VERIFICATION IN LARGE SYSTEMS

Assignee: Intel Corporation

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REMARKS

This communication responds to the Office Action mailed on October 3, 2005, which reopened the prosecution after appeal. Claims 1, 4, 9, 10, 14, 18, 21, and 28 are amended, claims 3 and 16-17 are canceled, and no claims are added. As a result, claims 1, 2, 4-15 and 18-28 are now pending in this Application. Claim 4 has been amended to conform to the amended language of claim 1 (and the cancellation of claim 3), and not for reasons related to patentability. Claim 9 has been amended to correct a typographical error, and not for reasons related to patentability.

Drawings

An objection was raised to the drawings as failing to comply with 37 CFR 1.84(p)(5) for including a reference number (i.e., "615") not mentioned in the specification. The specification has been amended to correct this typographical error (changing the label "612" in the specification text to "615" as shown in FIG. 6 of the drawings), and the Applicant thanks the Examiner for his careful review in this regard. No new matter has been added.

§101 Rejection of the Claims

Claims 1-23 were rejected under 35 USC § 101 because it was asserted in the Office Action that they are "disembodied and algorithmic in their nature where these method claims could be implemented through mental steps and/or constructed on paper with pencil, and are not limited to being performed by a computer or a machine." The Examiner has suggested that using the term "computer-implemented" in the independent method claim preambles will overcome the rejection if such is supported by the specification. The specification does indeed support such an amendment, and the support can be found in the specification at page 8, line 14 – page 9, line 2, and in FIG. 9, as-filed.

While the Applicant traverses the rejection as stated, the applicable independent claims have been amended as suggested in the interest of temporal economy, so as not to unduly prolong the interpretive disagreement between the Examiner and the Applicant. That is, these amendments have not been made for reasons related to patentability. Claims 16-17 are canceled

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without prejudice or disclaimer. Thus, the concerns of the Examiner should now be addressed, and the Applicant therefore respectfully requests that this rejection of the claims under § 101 be reconsidered and withdrawn.

§102 Rejection of the Claims

Claims 1-2, 10-11, 14, 16-18, 21-23, and 28 were rejected under 35 USC § 102(b) as being anticipated by Manjikian et al. (ACM, pp. 76-84 (1993); hereinafter "Manjikian"). The Applicant does not admit that Manjikian is prior art and reserves the right to swear behind this reference at a later date. In addition, because the Applicant asserts that the Office has not shown that Manjikian discloses the identical invention as claimed, the Applicant traverses this rejection of the claims.

It is respectfully noted that anticipation under 35 USC § 102 requires the disclosure in a single prior art reference of each element of the claim under consideration. See Verdegaal Bros. V. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). It is not enough, however, that the prior art reference discloses all the claimed elements in isolation. Rather, "[a]nticipation requires the presence in a single prior reference disclosure of each and every element of the claimed invention, arranged as in the claim." Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)) (emphasis added). "The identical invention must be shown in as complete detail as is contained in the ... claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP § 2131 (emphasis added).

In the Office Action, it is noted that "[t]he Examiner can find no difference between the expressly claimed limitations in Applicants' current claim language, specifically in regards to a "Latch Boundary Component" as claimed and the disclosed elements as cited in the Manjikian et al. reference." Since independent claims 1, 10, 14, 18, 21, and 28 have been amended to include the limitation of "using a bin-packing heuristic," the point is moot because Manjikian uses an iterative improvement technique, rather than a bin-packing heuristic. See Manjikian, pg. 79, Col. 2 and "Logic Verification of Very Large Circuits Using Shark," pg. 311, Col. 1. Therefore, independent claims 1, 10, 14, 18, 21, and 28 (as well as all claims depending from them) should

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be in condition for allowance, since Manjikian does not teach the identical invention claimed by the Applicant. Reconsideration and withdrawal of the rejection of claims 1-2, 10-11, 14, 18, 21-23, and 28 under § 102 is respectfully requested.

Allowable Subject Matter

The Applicant notes with appreciation that claims 24-27 have been allowed. Claims 3-9, 12, 13, 15, and 19-20 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, since it is believed that these claims are already in condition for allowance in view of the above arguments, the Applicant respectfully declines to amend them at this time.

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CONCLUSION

The Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone the Applicant's attorney, Mark Muller at (210) 308-5677, or Applicant's below-named representative to facilitate the prosecution of this Application. If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

MANPREET S. KHAIRA ET AL.

By their Representatives,

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Date 1/0v. 29, 2005

Ann M. McCrackin Reg. No. 42,858

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this day of December 2005.

CAROLYN HULSEY

Name

Signature